CLAIMS

What is claimed is:

1. A method, comprising:

receiving captured information pertaining to a current user of a device;

decoding the captured information to determine its content;

comparing the determined content with stored content to authenticate the user; and

if the user is authenticated, calling a function having parameters and executing that function to allow the authenticated user to access a service available via the device.

2. The method of claim 1 wherein executing the function to allow the authenticated user to access the service includes executing the function to allow the authenticated user to access an IP telephony service.

3. The method of claim 1 wherein executing the function to allow the authenticated user to access the service includes executing the function to allow the authenticated user to access a restricted wireless channel.

4. The method of claim 1, further comprising associating the determined content with a function string that specifies the function and at least one parameter to pass to the function.

5. The method of claim 1 wherein calling and executing the function includes remotely calling and executing the function.

6. The method of claim 1 wherein receiving the captured information includes receiving at least one of an image, audio, and biometric data associated with the current user of the device.

7. The method of claim 1, further comprising calling another function that denies access and sending a corresponding response message to the device if the user is not authenticated.

8. The method of claim 1, further comprising pre-processing the received captured information prior to decoding to at least one of improve a quality of that information and change a format of that information.

9. The method of claim 1 wherein decoding the captured information includes using a plurality of different decoders to attempt to decode the captured information, until at least one of these decoders results in a successful decoding.

10. A method, comprising:

receiving media pertaining to subject matter captured by a device;

decoding the received media to determine its content;

associating the determined content to a function string; and

calling and executing a function identified through the function string to return information to the device that is relevant to the captured subject matter.

11. The method of claim 10 wherein receiving the media includes receiving at least one of a human-recognizable image of the subject matter, audio associated with the subject matter, biometric information, and non-human-recognizable image.

12. The method of claim 11 wherein receiving the non-human-recognizable image includes receiving at least one of a 1D and 2D barcode.

13. The method of claim 10 wherein decoding the received media includes iteratively attempting to decode the media through a plurality of different decoders until at least one of these decoders results in a successful decoding.

14. The method of claim 10, further comprising pre-processing the received media prior to decoding.

15. The method of claim 10 wherein associating the determined content to the function string includes associating the determined content to a function mask that defines portions of the function string that identify the function and at least one of its parameters.

16. The method of claim 10 wherein associating the determined content to the function string includes associating the determined content to an alphanumeric string that provides an ID of the function and parameter data pertaining to that function.

17. The method of claim 10 wherein calling the function includes calling the function from a server unit remote from a server that receives the captured media.

18. The method of claim 10 wherein executing the function includes providing access to a restricted service to an authenticated user of the device.

19. The method of claim 10 wherein returning information to the device that is relevant to the captured subject matter includes at least one of returning data pertaining to a captured barcode, translation of a foreign language term, software

registration information, product information, historical data, electronic device settings, coupon redemption, movie information, competitive product data, menu suggestions, acknowledgement of facial or voice recognition, auction listings, biometric authentication information, people search data, and audio data.

20. The method of claim 10 wherein receiving the media includes receiving the media as part of an email, the method further comprising extracting the media from the email and passing the extracted media to at least one decoder.

21. An article of manufacture, comprising:

a machine-readable medium having instructions stored thereon to:

pre-process captured information pertaining to a current user of a device;

decode the captured information to determine its content;

compare the determined content with stored content to authenticate the user; and

call a function, if the user is authenticated, having parameters that specify values pertaining to permissions of the authenticated user and execute that function to allow the authenticated user to access a service available via the device.

22. The article of manufacture of claim 21 wherein the instructions to pre-process the captured information includes instructions to pre-process at least one of voice, image, and biometric data provided by the current user.

23. The article of manufacture of claim 21 wherein the instructions to execute the function includes instructions to allow the authenticated user to access at least one of a restricted wireless frequency and an IP telephony service.

24. The article of manufacture of claim 21 wherein the instructions to decode the captured information include instructions to iteratively attempt to decode the

captured information with a plurality of different decoders until one of these decoders provide a successful decode.

25. The article of manufacture of claim 21 wherein the machine-readable medium further includes instructions stored thereon to associate the determined content with a function string, represented by a function mask, that specifies the function and the parameters to pass to that function.

26. A system, comprising:

a means for receiving media pertaining to subject matter captured by a device;

a means for decoding the received media to determine its content;

a means for associating the determined content to a function string; and

a means for calling and executing a function identified through the function string to return information to the device that is relevant to the captured subject matter.

27. The system of claim 26 wherein the means for decoding the received media include means for decoding human-recognizable or non-human-recognizable media.

28. The system of claim 26, further comprising a means for extracting the received media from a communication received from the device, and a means for generating a response having the relevant information.

29. The system of claim 26, further comprising a means for authenticating a user of the device.

30. The system of claim 26, further comprising a means for capturing the subject matter and for sending the captured subject matter to be decoded.

31. The system of claim 26, further comprising a means for defining a function string associated with the function and its parameters.

32. The system of claim 26, further comprising a means for storing information pertaining to functions, reference data, and media to be returned to the device.

33. The system of claim 26, further comprising:

a means for processing a first user action associated with capturing the subject matter; and

a means for processing a second user action associated with purchasing a product related to the captured subject matter.

34. An apparatus, comprising:

a first unit to receive captured media;

at least one second unit coupled to the first unit to decode the captured media;

a third unit coupled to the second unit to request a function and its parameters corresponding to the decoded media; and

a fourth unit coupled to the third unit to execute the requested function and to return a result of the executed function that is related to the captured media.

35. The apparatus of claim 34, further comprising at least one fifth unit coupled to the at least one second unit to pre-process the captured media prior to decode.

36. The apparatus of claim 35 wherein the at least one fifth unit comprises a plurality of filters having operation sets that apply operations to the captured media to improve its quality or to change its format.

37. The apparatus of claim 34 wherein the at least one second unit includes a plurality of different decoders usable for different media types.

38. The apparatus of claim 34, further comprising another unit to associate a function string with the decoded media.

39. The apparatus of claim 34, further comprising at least one processor and a storage medium, wherein at least some of the units are embodied in software stored on the storage medium and executable by the processor.

40. The apparatus of claim 34, further comprising a storage unit to store function information, parameters and parameter values, and media.

41. The apparatus of claim 40 wherein the storage unit includes a media-to-function lookup unit to associate the decoded media to a function.

42. The apparatus of claim 34, further comprising at least another unit on which the function is executed.

43. The apparatus of claim 42 wherein the at least another unit is remotely located from at least some of the other units.

44. The apparatus of claim 34, further comprising a mail unit to extract the captured media from a communication received from a user device, and to provide the captured media to the first unit.

45. The apparatus of claim 44, further comprising a response unit to package the result of the executed function as a response to the user device.

46. The apparatus of claim 45 wherein either one or both of the mail unit and response unit are located in a mail gateway device remote from the other units.

47. The apparatus of claim 34 wherein one of the second units includes a user authentication unit.

48. The apparatus of claim 34 wherein the second unit comprises a decoder plug-in program.

49. The apparatus of claim 34 wherein at least some elements of the units are embodied as objects.